

REMARKS

Reconsideration of the application in view of the above amendments and following remarks is respectfully requested.

Status of the Claims

Claims 3, 5 and 8 stand objected to.

Claims 1-9 stand rejected.

Claims 1, 3 and 6 have been amended.

Claim 10 has been added.

No new matter is added.

Claims 2, 4, 5 and 7-9 have been cancelled without prejudice or disclaimer of the subject matter therein.

Claims 1, 3, 6 and 10 are now pending.

Objections to the Drawings

The drawings stand objected to for failing to comply with 37 CFR § 1.84(p)(5). Specifically, the Examiner states that reference numeral 3 is shown in Figures 1, 3, 12 and 13 but not described in the Specification.

It is respectfully submitted that reference numeral 3 is described in the Specification, for example, on page 8, lines 2 and 4. Withdrawal of the objection is respectfully requested

Objections to the Claims

Claims 3, 5 and 8 stand objected to for informalities. Specifically, the claims were objected to for including parentheses around essential elements of the claims. Claim 3 has now been amended in accordance with the Examiner's suggestions to remove the parentheses. Claims 5 and 8 have been cancelled rendering the rejection moot with respect to those claims.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 4 and 7 stand rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement.

It is respectfully submitted that claims 4 and 7 have been cancelled without prejudice rendering the rejection moot with respect to these claims.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 3, 5 and 8 were rejected as under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

It is respectfully submitted that claim 3 has now been amended to recite the features of the invention in such a manner to conform with 35 U.S.C. § 112, second paragraph. Claims 5 and 8 have been cancelled without prejudice, thereby rendering the rejection moot with respect to these claims. Reconsideration and withdrawal of the rejection of claims 3, 5 and 8 under 35 U.S.C. § 112, second paragraph, is respectfully submitted.

Rejections Under 35 U.S.C. § 103

Claims 1-9 were rejected under 35 U.S.C. § 103(a) based on U.S. Patent No. 6,765,617 to Tangen et al. ("Tangen") and U.S. Patent No. 7,262,799 to Suda et al. ("Suda"). The Examiner states that Tangen describes an image input apparatus with a micro-lens array and a light detecting element facing the micro-lens array and that the relative position between the micro-lens and the region on the light detecting element on which the object reduced images are focused are arrayed differently for each micro-lens. The Examiner admits that Tangen fails to teach the relative position between the micro-lens and the prescribed region. The Examiner relies on Suda as disclosing an image sensing apparatus with first and second image sensing areas that are separated in the horizontal and vertical directions. The Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of the invention to sift the imaging elements by a predetermined distance in Tangen in order to enhance image resolution. Applicants respectfully traverse

Independent claim 1 has now been amended to recite that

“a relative position between a light axis of said micro-lens and a central axis of said light receiving element, on which said object reduced images are focused as responding to each one of said micro-lenses, is arrayed to sequentially increase by a certain quantity so that one end is smallest and the other end is largest relative to vertical and horizontal directions in an alignment of said micro-lens array.”

By varying the relative position between the light axis of the micro-lens and central axis of the light receiving element, “a high-resolution, single reconfigured image of the subject can be obtained even if the distance between the subject and the said micro-lens array is long (infinitely long, for example),” as set forth in the Specification, at page 3, lines 10-12. It is respectfully submitted that any combination the cited references do not teach or suggest this feature.

The Examiner admits that Tangen fails to teach the relative position between the micro-lens and the prescribed region on which an object reduced image is focused. Suda too fails to teach or suggest this feature. In contrast, Suda states that “each microlens 821 is decentered with respect to the corresponding light-receiving portion of the solid-state image sensing element 820, and the decentering amount is set at zero at the center of each of the image sensing areas 820a, 820b, 820c, and 820d and becomes larger toward the outer peripheral portion.” See Suda, column 9, line 65 to column 10, line 4, and Fig. 8. Likewise, with respect to Fig. 26, to which the Examiner makes reference, that figure shows four image sensing areas where each object image is offset $\frac{1}{4}$ pixels in the vertical and horizontal directions from the centers of the image sensing areas in the direction to approach a center of the entire image sensing area. See Suda, Fig. 26 and column 28, lines 22-28. Thus, any combination of Tangen and Suda would fail to teach or suggest that relative position between the light axis of the microlens and the central axis of the light receiving element are “arrayed to sequentially increase by a certain quantity so that one end is smallest and the other end is largest relative to vertical and horizontal directions in an alignment of said micro-lens array,” as recited in independent claim 1. Accordingly, a combination of Tangen and Suda cannot obtain a high-resolution, single reconfigured image of a subject when the distance between the subject and the micro-lens array is long, as is capable with the present invention. Because the cited references, either alone or in combination, fail to teach or suggest each and every feature of claim 1, these references cannot render claim 1 or its dependent claims 3 and 6 obvious.

Reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) based on Tangen and Suda is respectfully requested.

New Claim 10

New claim 10 has been added. Claim 10 is similar in scope to claim 6 and depends from claim 3, which depends from claim 1. Claim 10 is patentable over the cited references for at least the same reasons as claim 3.

CONCLUSION

Each and every point raised in the Office Action dated June 25, 2008 has been addressed on the basis of the above amendments and remarks. In view of the foregoing it is believed that claims 1, 3, 6 and 10 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below

Dated: September 25, 2008

Respectfully submitted,

By /Colin Wright/.
Colin Wright

Registration No.: 62,900
DARBY & DARBY P.C.
P.O. Box 770
Church Street Station
New York, New York 10008-0770
(212) 527-7700
(212) 527-7701 (Fax)
Attorneys/Agents For Applicant